

In the Claims

Please cancel all pending claims, i.e., currently pending amended claims 1-30, without prejudice or disclaimer of the subject matter recited therein.

Please add the following new claims:

B¹ --31. A method of operating a machine for manufacturing and/or refining a material web wherein the machine includes at least one machine section, the method comprising:
arranging a plurality of measurement zones in series along a process direction; and
detecting data in a region of the at least one machine section via at least one measurement zone of the plurality of measurement zones,
wherein the data concerns at least one measured parameter relating to the manufacture or refinement of the material web.

32. The method of claim 31, wherein the material web is a paper web.

33. The method of claim 31, wherein the at least one machine section is a drying section.

34. The method of claim 31, wherein the detecting comprises detecting data at each

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of the plurality of measurement zones.

35. The method of claim 31, wherein the detecting comprises detecting data at at least two measurement zones of the plurality of measurement zones.

36. The method of claim 35, wherein the detecting comprises substantially simultaneously detecting data at the at least two measurement zones.

37. The method of claim 31, wherein the at least one machine section comprises a plurality of part sections.

38. The method of claim 37, wherein the detecting comprises detecting data in a region of at least one part section of the plurality of part sections.

39. The method of claim 31, further comprising changing a machine setting of at least one machine component of the at least one machine section.

40. The method of claim 31, further comprising controlling or regulating a machine setting of at least one machine component of the at least one machine section.

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41. The method of claim 31, wherein the data relates to at least one of the at least one machine section, the material web and to an environment of the material web or the at least one machine section.

β⁷ 42. The method of claim 41, wherein the data relates to the material web and comprises at least one of a moisture of the material web, a temperature of the material web, a thickness of the material web, and a weight per unit area of the material web.

43. The method of claim 41, wherein the data relates to the at least one machine section and comprises at least one of a characteristic value of a surface of the at least one machine section.

44. The method of claim 43, wherein the surface comprises a roll or cylinder surface and wherein the characteristic value comprises a temperature.

45. The method of claim 31, wherein the at least one machine section comprises at least one of a steam system and a condensate system and wherein the data relates to a characteristic value of the steam system or condensate system.

46. The method of claim 31, wherein the at least one machine section comprises a screen and wherein the data relates to a characteristic value of the screen.

47. The method of claim 46, wherein the characteristic value comprises at least one of a temperature, a moisture content, and a permeability of the screen.

48. The method of claim 31, wherein the data relates to at least one a characteristic value of an environment of the at least one machine section.

49. The method of claim 48, wherein the characteristic value of the environment comprises at least one of an air temperature, an air moisture content, an airflow speed, and an airflow direction.

50. The method of claim 31, wherein the detecting comprises detecting data at at least two measurement zones of the plurality of measurement zones, the detecting of the at least two measurement zones occurring substantially uninterruptedly.

51. The method of claim 31, wherein the detecting comprises detecting data at at least two measurement zones of the plurality of measurement zones, the detecting of the at least

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two measurement zones occurring at regular time intervals.

52. The method of claim 31, further comprising supplying the data to an evaluation unit.

53. The method of claim 52, further comprising monitoring and/or influencing the manufacture or refinement of the material web using the evaluation unit.

54. The method of claim 52, further comprising continuously controlling and/or regulating the manufacture or refinement of the material web using the evaluation unit.

55. The method of claim 52, wherein the at least one machine section comprises a plurality of machine components, the method further comprising independent controlling and/or regulating each of the plurality of machine components.

56. The method of claim 31, further comprising evaluating the data to effect changes in the manufacture or refinement of the material web.

57. The method of claim 56, wherein the evaluating comprises determine at least one

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of a localized disturbance and a faulty machine component of the at least one machine section.

58. The method of claim 56, wherein the evaluating comprises creating a model which describes the manufacture or refinement of the material web.

59. The method of claim 31, further comprising storing the data regarding the manufacture or refinement of the material web.

60. The method of claim 31, further comprising transmitting the data regarding the manufacture or refinement of the material web to another location.

61. The method of claim 60, wherein the transmitting comprises transmitting the data via the Internet.

62. The method of claim 60, further comprising evaluating the data at the other location to effect changes in the manufacture or refinement of the material web.

63. The method of claim 31, wherein the detecting comprises detecting data using

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reflection measurement.

64. The method of claim 31, further comprising at least one of supporting the material web and guiding the material web, wherein the detecting comprises detecting the data in a region of the material web.

65. The method of claim 31, further comprising at least one of supporting the material web and guiding the material web on at least one of a screen, a cylinder and a roll, wherein the detecting comprises detecting the data in a region of the screen, the cylinder or the roll.

66. The method of claim 31, further comprising regulating or checking at least one of a longitudinal profile and a course of the material web.

67. The method of claim 31, wherein the at least one machine section comprises a dryer section, the method further comprising regulating or checking at least one of a heating curve of the dryer section.

68. The method of claim 31, wherein the at least one machine section comprises a dryer section, the method further comprising continuously regulating or checking at least one

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of a heating curve of the dryer section.

69. The method of claim 31, wherein the at least one machine section comprises a dryer section, the method further comprising regulating at least one component of the dryer section, wherein the at least one component comprises at least one of an individual dryer group, a dryer, and a humidifier.

70. The method of claim 31, further comprising regulating a transverse moisture profile of the material web.


71. The method of claim 70, wherein regulating comprise step-wise regulating the transverse moisture profile of the material web.

72. The method of claim 70, wherein the data relates to a measured humidity content and wherein regulating comprise step-wise regulating the transverse moisture profile of the material web based upon the measured humidity content.

73. The method of claim 31, wherein the at least one machine section comprises a plurality of zone-wise regulatable dryers, the method further comprising regulating a

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transverse moisture profile of the material web.



74. The method of claim 31, wherein the at least one machine section comprises a press section having at least one steam blow box, the method further comprising regulating a transverse moisture profile of the material web.

75. The method of claim 31, further comprising regulating a longitudinal moisture profile of the material web.

76. The method of claim 75, wherein the data relates to a measured humidity content and wherein regulating comprise regulating the longitudinal moisture profile of the material web based upon the measured humidity content.

77. A measurement system for use in operating a machine for manufacturing and/or refining a material web wherein the machine includes at least one machine section, the system comprising:

a plurality of measurement zones arranged in series along a process direction of the machine;

at least one of the plurality of measurement zones being located in the at least one

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machine section;

at least one measurement device for detecting data being located in at least one of the plurality of measurement zones; and

an evaluation unit for evaluating the data.

78. The system of claim 77, wherein the data concerns at least one measured parameter that relates to the manufacture or refinement of the material web.

79. The system of claim 77, wherein the material web is a paper web.

80. The system of claim 77, wherein the at least one machine section is a drying section.

81. The system of claim 77, wherein each of the plurality of measurement zones includes at least one measurement device.

82. The system of claim 77, wherein at least two measurement zones of the plurality of measurement zones comprise at least one measurement device.

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83. The system of claim 77, wherein the at least one measurement device is at least one of rotatable and movable in at least two degrees of freedom.

84. The system of claim 77, wherein the at least one measurement device is at least one of rotatably movable and linearly movable.

85. The system of claim 77, wherein the at least one measurement device is movable and capable of detecting the data at a plurality of measurement locations.

86. The system of claim 77, wherein the at least one measurement device is movable in a direction which is approximately perpendicular to the process direction.

87. A measurement system for use in operating a machine for manufacturing and/or refining a material web wherein the machine includes a press section, a dryer section and a refinement section, the system comprising:

a plurality of measurement zones arranged in series along a process direction of the machine;

each of the dryer section and the refinement section including at least two measurement zones;